

A language vitality survey of Macuxi, Wapichana and English in Serra da Lua, Roraima (Brazil)

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Serra da Lua is a multilingual region in the state of Roraima (Brazil) where Macuxi (Carib), Wapichana (Arawak), Brazilian Portuguese and Guyanese English are all spoken. Based on a self-reported language survey, we present an assessment of the vitality of the languages spoken in this region and the attitudes of the speakers towards these languages. While previous literature has reported the existence of English speakers in this region, the literature does not provide more details about domains of use or the attitudes towards the English language in contrast with Portuguese and the Indigenous languages. This paper helps to address this gap. In sum, the goals of this paper are twofold: first, in light of the results of the survey, to discuss the vitality of the Macuxi and Wapichana languages in the Serra da Lua communities according to the criteria set out by UNESCO's "Nine Factors" for assessing language vitality; and second, to provide insight about the use of English in this region.

1. INTRODUCTION.¹ This paper summarizes and discusses the results of a language vitality survey conducted in Serra da Lua, Roraima state, Brazil in September 2017. The survey was conducted in three mixed Wapichana (Arawak) and Macuxi (Carib) Indigenous communities located on the Brazil-Guyana border. Due to the demographics of the communities as well as the proximity to the Guyanese border, Wapichana, Macuxi, English, and Brazilian Portuguese are spoken in each community. The survey focused on factors of language vitality such as intergenerational transmission, domains of language use, and language attitudes toward each language used in the community, as well as more qualitative questions regarding ethnic identity and urban

¹ We would like to thank the communities of Alto Arraia, Pium, and Manoá in Serra da Lua for their openness and hospitality, as well as Geraldo Douglas and Celino Raposo for their support and guidance. The authors are also grateful for the institutional support of the State University of Roraima (UERR), and the support of the Faculty of Arts & Sciences Undergraduate Research Fund at the University of Toronto. We also thank João Carneiro for allowing us to reproduce maps from his master's thesis.

migration. Thirty participants were surveyed. The paper's main goals are firstly, to discuss the vitality of Macuxi and Wapichana under UNESCO's (2003) "Nine Factors" tool of language vitality; and secondly, to provide a preliminary overview of the use of English in these communities.

1.1 THE MACUXI AND WAPICHANA IN RORAIMA. Macuxi (ISO 639-1: mbc; Cariban) and Wapichana (ISO 639-1: wap; Arawakan) are spoken in the Brazilian state of Roraima as well as the Rupununi region of Guyana, with small numbers of speakers in Venezuela. (According to the 2011 Venezuelan census, there are 89 Macuxi and 37 Wapichana people in the country (INE 2015: 30-31)). The state of Roraima, where this study took place, is located in Northern Brazil, sharing borders with Guyana and Venezuela, as well as with the Brazilian states of Amazonas and Pará (see Figure 1).

Roraima's population was estimated to be 520,000 in 2017 (IBGE 2017), approximately 50,000 of which is Indigenous (IBGE 2012: 11), representing the largest proportion of Indigenous people of all Brazilian states (IBGE 2012: 10). This population comprises several Cariban groups (Ingarijó, Taurepang, Macuxi, among others),² Yanomaman groups (Yanomama, Yanomae, Sanöma, Ninam, Yaroamä, and Yänoma), and one Arawakan group, the Wapichana. The state encompasses the basin of the Rio Branco, a large Amazonian tributary. The north and northeast of the state is covered by a savannah (*lavrado* in Portuguese), while the northwest and south are forested (Hemming 1990: 1). In the savannah, the largest and more prominent Indigenous groups in the state are the Macuxi and the Wapichana, numbering approximately 30,000 and 10,000, respectively (Santilli 2004). The number of speakers for each language is estimated to be much lower; Crevels (2011) lists 15,000 speakers for Macuxi and 4,000 for Wapichana. The most recent Brazilian census provides a similar figure for Wapichana but a drastically lower figure for Macuxi (5,806 speakers) (IBGE 2010: Table 1.15).³ While the Wapichana tend to live in the southeast of the savannah, the territorial divisions are not strict, and there are several mixed villages where both Macuxi and Wapichana people live (Ferri 1990: 18).

In the context of Brazilian Indigenous languages, the number of speakers and the population of ethnic Macuxi and Wapichana are quite large). Of the 160-180 extant languages of Brazil, nearly a third are spoken by less than 100 speakers (Rodrigues



FIGURE 1: Roraima and Indigenous Territory Serra da Lua (Carneiro 2007: 18).

² The Macuxi and their immediate Cariban neighbours, including the Taurepang and Arekuna, constitute the broader grouping of Pemon. This grouping contrasts with that of Kapon, a grouping consisting of the Ingarijó and Patamona (Santilli 2004).

³ It is unclear why the IBGE figure for Macuxi speakers is so much lower than the one provided in Crevels (2011), though it includes only speakers above the age of 5 in Indigenous territories who speak the language at home.

2014). Indeed, Macuxi has the second largest number of speakers of an Indigenous language in Brazil (if we use Crevels' figure) (Rodrigues 2014). Both Wapichana and Macuxi, then, are in a relatively advantageous position for continued survival of their languages due to the size of their speech communities.

In Brazil, only Portuguese and LIBRAS (Brazilian Sign Language) are official languages.⁴ However, a total of seven Brazilian Indigenous languages are co-officialized in municipalities in different states (Machado 2016: 58). Macuxi and Wapichana were officialized in 2015 in the municipalities of Bonfim and Cantá. According to Machado (2016: 59) all Macuxi and Wapichana communities are located in these areas. Existing linguistic documentation for Macuxi and Wapichana is relatively vast in comparison to other Brazilian Indigenous languages (cf. Moore & Galucio 2016). A non-comprehensive list of materials written on Macuxi and Wapichana languages is presented in Section 2.4.

1.2 SITE OF FIELDWORK: COMMUNITIES AND PARTICIPANTS. We visited three communities, Alto Arraia, Pium, and Manoá, all located in the Serra da Lua region. Serra da Lua contains nine Indigenous territories (*Terras Indígenas*),⁵ where 17 Indigenous communities are situated. Figure 2 shows their distribution in the region. The yellow patches show demarcated Indigenous territories. We chose to conduct our research in these three villages due to their proximity with the Guyanese border, and because some members of these communities speak English along with the Indigenous languages. Population figures for each village are shown in Table 1.

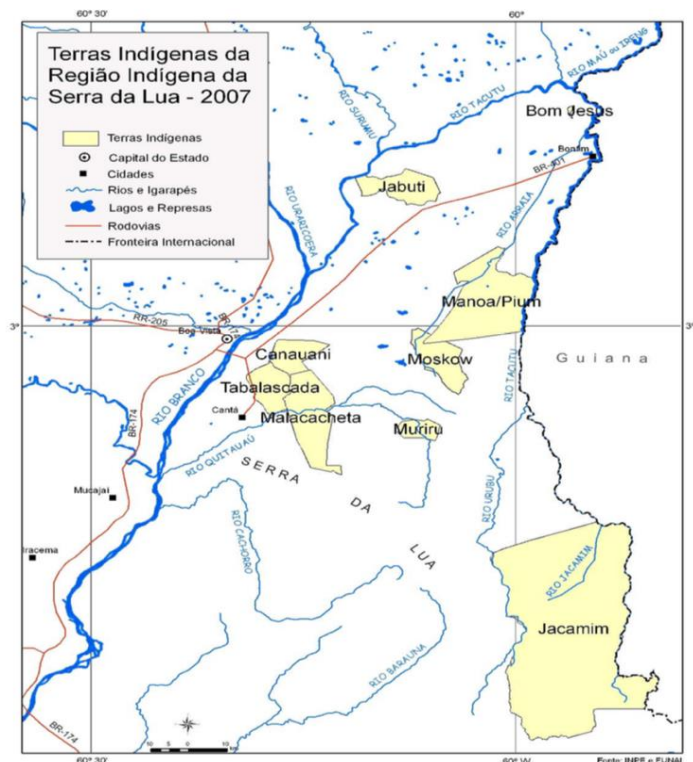


FIGURE 2: Indigenous Territory Serra da Lua (Carneiro 2007: 18)

⁴ LIBRAS has been an official language since 2002 (Law 10.436, April 24, 2002).

⁵ They are: Jabuti, Jacamim, Malacacheta, Tabalascada, Murin, Moskow, Manoá/Pium, and Canauni.

TABLE 1: Population of fieldwork sites

Community	Total population (Source: Prefeitura Municipal de Bonfim) ⁶
Alto Arraia	306
Pium	579
Manoá	1096

In this paper, we report the data of 30 interviews: 22 with Wapichana participants and 8 with Macuxi participants. Demographic information of the 30 participants is shown in Table 2.

TABLE 2: Participants by ethnicity, age, and community

Community	Macuxi participants by age		Wapichana participants by age			Total
	< 45	46+	< 18	18-45	46+	
Alto Arraia	0	1	0	1	2	4
Pium	0	0	2	2	6	10
Manoá	1	6	0	5	4	16
Total	8			22		30

We spoke to far more Wapichana people, reflecting that fact that our main connection to the communities in Serra da Lua, Geraldo Douglas, is a Wapichana teacher from Manoá. Most participants were also older than 45, as many younger adults were occupied with work during the day and did not have time to participate in the survey.

Serra da Lua is located less than 100 km to the east of Boa Vista, though some communities are more accessible than others.⁷ As a result of this proximity, there is frequent contact and migration to the city. All three communities are also just west of the Tacutu, a river which partially forms the Brazilian-Guyanese border. Approximately half of the interviewees were born in Guyana, and many still have relatives living on the Guyanese side. While this is not the first language vitality survey done in the region (see Franchetto 1988, as cited by Pearson & Amaral 2014; MacDonell 2003; van Diermen 2015), this survey had a special focus on English speakers, migration, and the social significance of each language spoken in these highly multilingual communities.

1.3 METHODOLOGY. The research team had the assistance of two Indigenous teachers, Geraldo Douglas (Wapichana), and Celino Raposo (Macuxi) when conducting the sociolinguistic interviews. We conducted the interviews in the three communities over two and a half days in September 2017. Geraldo Douglas resides in Manoá, so many of our interview participants were his relatives or friends. Interviews were conducted in English with those who spoke English. The Indigenous teachers conducted interviews in their Indigenous languages (Wapichana or Macuxi) and in Portuguese. Half of the interviews were conducted in Portuguese.

⁶ Prefeitura Municipal de Bonfim http://bonfim.rr.gov.br/pagina/192_Historia-da-Cidade.html (Date visited: February 10, 2020).

⁷ Leandro (2017: 14) notes that Jacamim, the most remote Indigenous territory in Serra da Lua, is 4–5 hours from Boa Vista and inaccessible in the rainy season due to flooding.

The survey had six sections covering the following: (1) basic information (age, gender, place of birth, level of education, marital status); (2) self-reported proficiency in each language, and domains of usage (cf. Fishman 1965); (3) literacy and experiences with education; (4) experiences living outside of the Indigenous community; (5) language and ethnic identity; and, (6) language use with new media (e.g., the Internet, television, radio). The analysis focuses mainly on information collected from sections 2, 3, 5, and 6 of the survey. Question (7) in section 2 was excluded from analysis (see Appendix A for full questionnaire).

The questionnaire is partially based on language vitality surveys used for other languages in Brazil (for example, MacDonell 2003). However, in our survey, we paid particular attention to attitudes toward languages spoken in the community (see section 4 of the questionnaire). In addition, while past surveys had established that there is language shift towards Portuguese, little mention was made of English and its role in these communities. Multilingualism in more than one Indigenous languages was also not discussed. Thus, in this survey, we also included questions related to the status and function of *each* language in this multilingual context, paying particular attention to Indigenous Guyanese migrants whose use of English has not been well studied. Section 5 in the survey also focuses on migration and its effects on ethnic identity and language proficiency, following Ferri's (1990) study of Indigenous migrants in Boa Vista, as rural-urban migration is a common occurrence in this region.

Most of the interviews were audio recorded. However, there were six interviews in which audio recording did not occur due to lack of equipment or lack of consent from the participant. Sections 4 and 5 were video recorded, except in nine interviews in which either the equipment malfunctioned or was unavailable, or the participants did not consent to being video-recorded. With the authorization of the interviewees, these videos are being used to create a short film about community members' feelings towards their language and identity. A total of 31 interviews were conducted, but one interview was excluded from analysis due to incomplete notes and a lack of audio recording.

In the next section of the paper, we will assess the survey data collected during fieldwork under UNESCO's "Nine Factors," a tool developed to assess language vitality in small-scale communities. We first provide an overview of four influential tools for assessing vitality and the rationale for using UNESCO's method. We examine Factors 1, 4, 5, 6, and 8 for Wapichana and Macuxi in light of the survey data (Sections 2.2–2.5 of this paper), and then the remaining factors (2, 3, 7, and 9) using census data and previous literature, particularly van Diermen (2015) (Section 2.6).

In Section 3, we focus on English speaking members of the communities. Since both Macuxi and Wapichana people live on both sides of the Brazil-Guyana border, there is considerable migration between the two countries. Due to the relative economic prosperity of Brazil in relation to Guyana, many Indigenous people born in Guyana have settled in Brazil. While past literature (MacDonell 2003, Pearson & Amaral 2014; Carson 1982; Carvalho 2015; Leandro 2017) does mention these speakers, they do not comment much further on the use of English in the communities. Therefore a main focus of this paper is to describe the status of English in these Indigenous communities, both in terms of domains of use and the attitudes towards English in contrast with Portuguese, Macuxi, and Wapichana.

2. LANGUAGE VITALITY IN SERRA DA LUA. Situations of language shift, whereby a speech community begins to use the majority language rather than the traditional language, are common in minority and Indigenous communities. Communities may have only shifted to the majority language in some domains (such as education or religious worship) or may have stopped using the language in all but symbolic contexts. In the context of Serra da Lua, Macuxi, Wapichana, and English are languages which are undergoing language shift (though of course, shift away from English is not necessarily concerning for the Indigenous communities).

In order to determine the degree of language shift and thus, the vitality of the language, it is important to consider “a range of largely quantifiable sociolinguistic factors” (Dwyer 2011: 1). Assessing language vitality is a crucial preliminary step in developing strategies to reverse language shift (Dwyer 2011: 11). Several tools have been developed to assess language vitality in communities; for example, the Graded Inter-generational Disruption Scale (GIDS; Fishman 1991, as cited in Dwyer 2011: 1); the Extended Graded Intergenerational Disruption Scale (EGIDS; Lewis & Simons 2010, as cited in Dwyer 2011: 9); UNESCO’s (2003) “Nine Factors” language assessment tool (cf. Dwyer 2011); and the Catalogue of Endangered Languages’ (ELCat’s) Language Endangerment Index (LEI; Lee & Van Way 2016).

The GIDS provides a scale with eight levels which emphasize intergenerational transmission (as per the scale’s title), language domains, and literacy. EGIDS extends Fishman’s scale, adding two new levels to the scale, thus enabling a more fine grained analysis than GIDS, though it does retain Fishman’s attention to intergenerational transmission, domains, and literacy. UNESCO’s (2003) tool provides nine factors for assessing language vitality, including factors which GIDS and EGIDS do not consider, such as the amount and quality of documentation and the absolute number of speakers. All factors (excluding the absolute number of speakers) are assessed on a scale of 0-5, where 5 represents the most favorable or “safe” situation. The factors are:

1. Intergenerational Language Transmission
2. Absolute Number of Speakers
3. Proportion of Speakers within the Total Population
4. Trends in Existing Language Domains
5. Responses to New Domains and Media
6. Materials for Language Education and Literacy
7. Governmental and Institutional Language Attitudes and Policies, including Official Status & Use
8. Community Members’ Attitudes toward their Own Languages
9. Amount and Quality of Documentation

LEI is a newer tool that was created to support The Endangered Language Catalogue, which “aims to provide reliable and up-to date information on the endangered languages of the world” (Lee & Van Way 2016: 272). In contrast to the aforementioned tools, LEI takes a quantitative approach to assessing language endangerment (Grenoble 2016: 293). Each language is given an overall vitality score based on four factors: intergenerational transmission, absolute number of speakers, speaker number trends, and domains of use, allowing it to be used even if particular information about the language is missing (Lee & Van Way 2016: 272).

LEI differs from UNESCO's approach, as it leaves out factors such as type and quality of documentation, which Lee & Van Way consider to not directly affect language vitality (2016: 277). UNESCO's tool also only allows users to consider each of the nine factors individually, since there is no overall quantified score as with LEI. While Lee and Van Way assert several advantages to quantification including gaining "a bird's-eye view" of language endangerment, it has been criticized, particularly by Grenoble who levels criticism at the use of aggregate data, arguing that "the benefit of a bird's eye view comes at the cost of detailed analysis and differences between communities are hidden in the aggregate" (2016: 33).

In an area like Serra da Lua, where different communities may have different "language ecologies" (Haugen 1972, as cited in Grenoble 2012) due to factors like their proximity to the border and differing proportions of Macuxi and Wapichana people, a more comprehensive tool was necessary. UNESCO's tool emphasizes factors like language attitudes and documentation in addition to absolute numbers, intergenerational transmission, and domains, allowing us to better understand the role and social meanings of each language in the communities. In the remainder of this section, we address the vitality of Macuxi and Wapichana in Serra da Lua based on Factors 1, 4, 5, 6, and 8, which were addressed by our questionnaire. We will also comment on Factors 2, 3, 7, and 9 based on previous work (particularly, van Diermen 2015), census data and available materials in the literature. Although English is also a minority language in the context of these communities, we will focus on its use separately in Section 3.

2.1 INTERGENERATIONAL LANGUAGE TRANSMISSION. Intergenerational language transmission is generally measured by examining whether all age groups in a particular community use the language, as well as the domains in which the language is used. Several researchers who have worked with the Macuxi or Wapichana have noted situations of weak intergenerational transmission, especially in communities close to Boa Vista (Carson 1982; Franchetto 1988, as cited in Pearson & Amaral 2014; MacDonell 2003; Pearson & Amaral 2014). Tables 3 and 4 show the languages which individuals are fluent in by age-group. Each table includes only individuals who identified as Wapichana (Table 3) or Macuxi (Table 4), as multilingualism in both languages was not frequent in our sample.

TABLE 3: Self-reported language fluency (Wapichana participants)

Language(s)	Age < 18	Age 18-45	Age 46+	Total
Wapichana, English, Portuguese	0	3	10	13
Wapichana, Portuguese	1	4	2	7
Wapichana, Macuxi, Portuguese	1	0	0	1
Portuguese	0	1	0	1
Total	2	8	12	22

Nearly all Wapichana participants reported that they are able to speak Wapichana fluently (twenty out of twenty-two). The one participant who reported being non-fluent in Wapichana is younger (aged 38) and spent considerable time away from Indigenous communities. He is, however, able to understand Wapichana and noted that he is trying to learn, speaking it occasionally with his wife and friends. Notably, all fluent Wapichana speakers are fluent in Portuguese, and many are also fluent in English, es-

pecially older speakers. Indeed, it appears that older people tend to be more multilingual, with ten out of twelve adults over 46 being fluent in English in addition to Portuguese and Wapichana. There were no Wapichana monolinguals surveyed.

TABLE 4: Self-reported language fluency (Macuxi participants)

Language(s)	Age 18-45	Age 46+	Total
Macuxi, Portuguese	0	6	6
Macuxi, Wapichana, English	0	1	1
Portuguese	1	0	0
Total	1	7	8

Table 4 shows that seven out of eight Macuxi reported speaking Macuxi fluently, though all of these speakers were older adults. The one speaker that was under 45 (aged 28) is monolingual in Portuguese, with some understanding of Macuxi. As with the Wapichana, there were no monolingual Macuxi speakers in these communities and older speakers seem to be quite multilingual.⁸

It is important to note that we focused on the adult population. Information regarding children comes from the responses of their parents and grandparents except for two children (aged 11 and 12) who were interviewed directly. Both of the children are fluent in Wapichana as well as Portuguese. One of them is also fluent in Macuxi as one of his parents is Macuxi. Both children report using the Indigenous language both in more formal contexts such as at school with friends or teachers, as well as in some home and traditional contexts such as speaking to grandparents or elders and at village meetings. It does seem, however, that Portuguese tends to be used as the default with most interlocutors. For example, one of the children reported using both Wapichana and Portuguese with friends, though they used Wapichana less frequently than Portuguese.

Interestingly, both children reported that they used Portuguese with their parents. Indeed, the responses of parents show that younger parents tend to use Portuguese more frequently with their children. Of the seven parents under 45 who were surveyed (all of whom were Wapichana), three reported speaking only Portuguese, and one parent reported speaking only Wapichana. An additional three reported speaking Portuguese and Wapichana with their children (one parent used English as well), and two of these parents reported that they tended to speak Portuguese more, as their children respond in Portuguese. By contrast, all eighteen parents older than 45 reported using the Indigenous language (either Macuxi or Wapichana) with their children exclusively or in conjunction with Portuguese, English, or both. Only two noted that they used English or Portuguese more frequently than the Indigenous language.

Although most of the younger parents speak Wapichana fluently (six out of seven), and use it in other domains, it appears that they prefer to speak to their children in the dominant language. This suggests that the use of Wapichana is less robust in

⁸ Though our sample for Macuxi participants is very small, we cannot use other sources such as census data to supplement it. While IBGE (2010) presents the number of Macuxi speakers broken down by age, it does not provide the total number of Macuxi people by age group. No conclusions regarding intergenerational language transmission can be drawn from the absolute number of speakers by age.

home domains with young children, weakening intergenerational transmission. The situation of these communities, which are in close proximity to the capital city, but not immediately outside it, is more favorable than communities on the periphery of Boa Vista. Several authors (Carson 1982; Pearson & Amaral 2014) have noted that language shift is quite dramatic in such communities, and that children have extremely limited receptive competency in the Indigenous language.⁹

Yet, from these admittedly limited survey results, we learned that there are some children learning the Indigenous language from other family members and in the community. Thus, according to UNESCO's scale for this factor, we would assess the situation for both languages as between "Definitively Endangered" and "Unsafe". This scale characterizes a "Definitively Endangered" language as "no longer being learned as the mother tongue by children in the home. The youngest speakers are thus of the *parental generation*." (UNESCO 2003: 8). An "Unsafe" language is characterized as being spoken by "most, but not all children or families as their first language" (UNESCO 2003: 7).

With Wapichana, it is clear that many parents speak the language, but do not necessarily use it with their children. However, the youngest speakers of Wapichana are still children, at least some of whom are acquiring the language in the home as an L1. These speakers are *not* in the parental generation— an important criterion for a language being "Definitively endangered". Yet, based on the answers obtained in this questionnaire, we can hypothesize that it is unlikely that most children or families use Wapichana as their first language— a criterion of a language being "Unsafe"—since so many young parents reported using mostly Portuguese.

Van Diermen (2015: 22) discusses the transmission of Wapichana across generations based on Franchetto's (2008) description of the language in the 1980s and personal communications with specialists on the language in 2015. In the 1980s, Franchetto (2008) observed "a generational rupture between grandparents who spoke Wapichana fluently, bilingual parents, and a youngest generation practically monolingual in Portuguese" (Franchetto 2008: 34 as quoted by van Diermen 2015: 22). In more recent years, van Diermen (2015: 22) reports personal communications with a specialist in the area that suggests that the situation has improved. Our interviewees mentioned the use of Wapichana in the school environment, but we have also learned that the use of Wapichana does not seem to be restricted to this environment. To determine the amount of families and children using the language in their home, more robust surveying would be needed and would also require observation of children's interaction with other children and adults; the same holds for the Macuxi families.

2.2 TRENDS IN EXISTING LANGUAGE DOMAINS. Within existing language domains, both Macuxi and Wapichana are frequently used alongside Portuguese. We asked each participant about the languages they use with specific interlocutors, such as parents, grandparents, spouses, and children, as well as their language use in specific situations such as day-to-day work, village meetings, and leisure (see Section 2 of the questionnaire).¹⁰ Unfortunately, we did not ask about language use in traditional ceremonies or in religious practices. However, following the tendency to use Indigenous

⁹ It is interesting to note that the pattern for intergenerational transmission is different on the Guyanese side of the border, according to Pearson & Amaral (2014), who note that the level of intergenerational transmission is quite high in Guyanese Wapichana communities.

¹⁰ Examples of leisure activities that we suggested to the consultants were: playing games with the kids, playing traditional games, playing sports, watching TV, or just talking among one another.

languages with older speakers and in educational contexts (see Section 2.1), we would expect a stronger presence of the Indigenous languages in such situations (and also in traditional ceremonies).

Of the eight Macuxi people interviewed, seven were older than 45. All fluent speakers stated that they used Macuxi in the home and community domains, and many noted that they would speak Macuxi with interlocutors who were able to and Portuguese with others. The youngest Macuxi participant, aged 28, could not speak the language. One of the Wapichana-identified participants spoke Macuxi fluently (aged 10) and noted using it with his grandparents, his Macuxi-language teacher at school¹¹, with some friends, and at village meetings. In most other domains, like working or during leisure activities, he reported using Portuguese. Unfortunately, more robust data on specific domains is not available given the small number of speakers interviewed, as most of the Macuxi participants answered all questions regarding domains with the same answer—that they “would speak Macuxi with those who can, and Portuguese with those who cannot.” There is also little data on how younger Macuxi people who are fluent in the language use it.

With Wapichana, our findings were more substantive, owing to the higher number of speakers interviewed. Wapichana is spoken within the community alongside Portuguese and English in all domains listed in the questionnaire. As an example, Tables 5 and 6 show the responses of all Wapichana participants for two specific domains: work and leisure.

TABLE 5: Languages used while working (Wapichana participants)

Language(s)	Age < 18	Age 18-45	Age 46+	Total
Wapichana	1 (4.5%)	3 (13.6 %)	7 (31.8%)	11 (50.0%)
Portuguese	1 (4.5%)	3 (13.6 %)		4 (18.2%)
English		1 (4.5%)		1 (4.5%)
English and Wapichana		1 (4.5%)	4 (18.1%)	5 (22.7%)
Portuguese and Wapichana			1 (4.5%)	1 (4.5%)
Total				22 (100%)

As Table 5 shows, half of the participants (n=11) reported using exclusively Wapichana, while just five reported using exclusively English or Portuguese. Half of the speakers younger than 45 reported using Wapichana in this domain as well (either exclusively or with English or Portuguese). By contrast, more speakers overall report using Portuguese exclusively in leisure activities (42.9%; shown in Table 6), and seven out of ten younger participants exclusively used Portuguese. English is also more often used (either by itself or with Wapichana) during work. It seems that there is a slight

¹¹ Indigenous schools in Roraima offer a “mother language” class, and, depending on the village, students can be taught by a Macuxi or a Wapichana native speaker teacher.

preference for Portuguese in leisure activities and more of a preference for Wapichana while doing traditional work. Speakers also reported using Wapichana more often with interlocutors who were older than them (i.e. parents, grandparents). Portuguese was reported as being used more often with spouses and children (especially among younger adults).

TABLE 6: Languages used during leisure activities (Wapichana participants)¹²

Language(s)	Age < 18	Age 18-45	Age 46+	Total
Wapichana		3 (14.3%)	4 (19%)	7 (33.3%)
Portuguese	2 (9.5%)	5 (23.8%)	2 (9.5%)	9 (42.9%)
English			1 (4.8%)	1 (4.8%)
English and Wapichana			1 (4.8%)	1 (4.8%)
Portuguese and Wapichana			3 (14.3%)	3 (14.3%)
Total				21 (100%)

Of course, it is difficult to say whether these discrepancies are significant, due to the small sample size. In addition, as this is self-reported data, we do not have a clear picture of actual language use (see Section 2.7). With such a multilingual population, it is doubtful that anyone uses exclusively one language in most domains. However, this data does demonstrate that Wapichana is spoken in existing domains within the communities, though in constant negotiation with Portuguese (and English, to a lesser extent). To turn to the UNESCO scale, both Wapichana and Macuxi seem to fit under the classification of “Dwindling Domains” (Grade 3), that is, “the language[s] [are] in home domains and for many functions, but the dominant language begins to penetrate even home domains” (UNESCO 2003: 10).

2.3 RESPONSES TO NEW DOMAINS AND MEDIA. Both Macuxi and Wapichana are not used robustly in new domains and media. Specifically, we examined Indigenous language education in schools, broadcast media, and the Internet. In the domain of education, Indigenous schools exist in all three communities.¹³ According to the responses of participants who had recently been schooled in their community, Macuxi and Wapichana are taught in the schools two or three times a week, for one hour, but the medium of education for non-language subjects is Portuguese. We did not observe classes, thus we cannot say whether the Indigenous languages are ever informally used for instruction beyond designated language classes or used amongst students themselves. Just two of the eight participants who had been schooled recently in an Indigenous

¹² There was no data for one participant.

¹³ Indigenous bilingual education has been present in Roraima since the late 1980s (Franchetto 2008).

community reported using the Indigenous language informally with friends at school, suggesting that schools in Indigenous communities are a domain of Portuguese.

In the domain of broadcast media, two participants reported the existence of radio shows in Macuxi and Wapichana, though many participants did not seem to know about them; to our knowledge, these shows are no longer available. The Internet is not widely used in the communities. Only seven out of thirty participants reported that they use the Internet; some mentioned that they only use it when they are in the city. Those who do use the Internet said that they exclusively used English or Portuguese in computer-moderated conversation, though they might use Wapichana or Macuxi in real life. One of the communities, Manoá, has bilingual Macuxi-Portuguese official documents but official documents for the other communities are written solely in Portuguese.

We can characterize the response to new domains as “coping” (Grade 2) under UNESCO’s scale for this factor—that is, “[Macuxi and Wapichana] [are] used in some new domains” (UNESCO 2006: 11). While there is laudable expansion into the domain of schooling and broadcast media, the time available is limited, and the use of the Indigenous languages on the Internet and in community governance is quite minimal. It is important to highlight, however, that an increase in the use of Macuxi and Wapichana in governmental documents (a new domain) might occur, given that these languages have been recently made co-official in the Bonfim and Cantá municipalities of Roraima. The co-officialization of Macuxi and Wapichana has had a positive effect in the domain of education, as it generated demand for Indigenous teachers who could teach these languages in municipal schools rather than just in state schools, as was previously the case (Machado 2016: 59). As such, we might expect the use of Macuxi and Wapichana to be further elaborated in new domains in the near future.

2.4 MATERIALS FOR LANGUAGE EDUCATION AND LITERACY. The existing literacy resources which exist currently do not seem to be accessible within the communities in Serra da Lua. Geraldo Douglas, the Wapichana teacher with whom we worked, stressed the need for more materials in his community (Manoá). Freitas (2003) discusses how Indigenous organizations in Roraima, such as Conselho Indígena de Roraima (CIR) and the Inskiran Institute (an institute for Indigenous higher education affiliated with the Federal University of Roraima) have worked with local Indigenous teachers to create classroom materials for Macuxi and Wapichana. In 2013, a pedagogical grammar for Macuxi, and a Wapichana-Portuguese dictionary was created through this program (Juvencio 2013; Silva et al. 2013). A Wapichana pedagogical grammar was also created by Luiz Amaral and Wendy Leandro in collaboration with several Indigenous teachers through ProDocLin (Amaral et al. 2017), as well as another one edited by the Museu do Índio (Oliveira et al. 2015).

Pedagogical materials in subjects other than language (i.e. mathematics, science) seem to be nonexistent, and most classes are held in Brazilian Portuguese.¹⁴ Thus, under UNESCO’s criteria, we would classify the communities in Serra da Lua at Grade 3: “Written materials exist and children may be exposed to the written form at school. Literacy is not promoted through print media” (UNESCO 2003: 12). While written ma-

¹⁴ Freitas notes in her thesis on bilingual Macuxi schools that the lack of Macuxi lexicon for other subjects makes it impossible for teachers to use the Indigenous language (2003: 140).

terials exist, and children do become literate at school, materials are not always accessible and lacking are “books and materials on all topics for various ages and language abilities” (UNESCO 2003: 12).¹⁵

2.5 COMMUNITY MEMBERS’ LANGUAGE ATTITUDES. Community members showed an overwhelmingly positive attitude towards their languages and Indigenous languages in general. Nearly all participants said that they enjoyed speaking Macuxi or Wapichana. All participants said that Macuxi and Wapichana should continue to be taught in schools and learned by children, often citing an essential link between language, ethnicity, and culture as illustrated in the following quotations:

(1) “What [Wapichana] means to me, is that it’s my origin, no? My word is Wapichana in my heart” [... *significa pra mim que é a minha origem, né ...minha palavra é Wapichana no meu coração.*]

(2) “For me Wapichana is a type of fruit that my grandfather gave to me [...] I can’t forget Wapichana” [*Pra mim Wapichana é tipo uma fruta que meu avô assim deu pra mim ...Eu não posso esquecer de Wapichana.*]

(3) “[Wapichana]’s ... my ID card. I talk Wapichana and I would never [leave] it, because it is my ID card”

Language, here, is linked inherently to ethnic identity (Wapichana as “ID card”) and past and future generations (Wapichana as a fruit from ancestors). Macuxi and Wapichana, thus, are valued as “key symbol[s] of group identity” for many members of the community (UNESCO, 2006:314). Participants also highlighted the importance of reading and writing, and nearly all expressed an interest in the development of online materials in Indigenous languages, suggesting that there is a strong desire to further elaborate the use of Macuxi and Wapichana in newer domains. One participant explicitly noted that the language should be valued in “all spaces,” not just at home. We believe this vigorous support by community members towards Macuxi and Wapichana characterizes the communities at Grade 4 under UNESCO’s criteria, that is, “most members value their language and wish to see it promoted” (UNESCO 2003: 14). Though everyone wished to see children continue to learn their Indigenous language, our sample was small and we cannot be completely sure that this is a unanimous belief.

2.6 OTHER FACTORS. UNESCO’s tool includes four factors that were not explored in our questionnaire. We will briefly comment on them based on previous literature and census data.

Factors 2 and 3 (Absolute Number of Speakers, Proportion of Speakers within the Total Population)

Wapichana. Previous work has examined UNESCO’s factors for the Wapichana language (van Diermen 2015). van Diermen (2015: 22) reports data from the IBGE 2010 census, according to which there were “127 monolingual speakers of Wapichana, 4,956

¹⁵ van Diermen gives this factor a higher score for Wapichana, citing the fact that there are more storybooks written in the language. These storybooks, however, seem to mostly originate from the Guyanese side of the border (OLAC n.d.), and it is unclear if these materials are accessible on the Brazilian side.

monolingual speakers of Portuguese and 3,823 bilinguals within Wapichana communities". According to van Diermen, this would amount to a percentage of 44% of Wapichana speakers (in 2003 the percentage of Wapichana speakers reported was 41%). IBGE counts a speaker as someone who uses the language in their household (van Diermen 2015: 21). We would need more recent data in order to evaluate the current state of the vitality of the language. Based on these numbers alone, we argue that with respect to this factor, Wapichana could be classified in between Grade 2, "severely endangered" ("a minority speak the language") and Grade 3, "definitely endangered" ("a majority speak the language") (UNESCO 2003: 9).¹⁶

Macuxi. According to the IBGE 2010 census, there are 5,806 speakers of Macuxi above the age of 5, comprising 160 monolingual and 5,646 bilingual speakers (IBGE 2010: Table 1.15). Totally, there are 23,998 Macuxi people above the age of 5 (*Ibid*: Table 1.15, meaning that the percentage of Macuxi speakers is approximately 24% of the total population. This proportion would classify Macuxi as "severely endangered" according to the UNESCO scale (UNESCO 2003: 9). However, as mentioned in Section 1.1, estimates for the number of Macuxi speakers vary. If we use Crevel's (2011) figure of 15,000 Macuxi speakers, and the figures presented in Santilli (2004), which lists 30,000 speakers, 50% of Macuxi people speak the language, suggesting that Macuxi is "definitely endangered". As with Wapichana, more recent data would provide a clearer picture of the current state of vitality, but we argue that Macuxi may be classified between "severely endangered" and "definitely endangered" for Factor 3.

Factor 7 (Governmental and Institutional Language Attitudes and Policies, including Official Status & Use)

Van Diermen (2015) argues that Wapichana can be evaluated under "definitely endangered" ("passive assimilation" under UNESCO's terminology: no explicit policy exists for minority languages; the dominant language prevails in the public domain). However, the co-officialization of Wapichana and Macuxi in the municipality of Bonfim is an important achievement: services are now required to be available in Macuxi and Wapichana, signposts must be translated, and Indigenous language books must be published. As previously discussed in paper, co-officialization can facilitate the demand for hiring speakers of these languages to work as teachers and in other public domains. According to Ananda Machado (p.c.), a professor at the Federal University of Roraima who helped promote officialization, teachers have already been hired to teach Macuxi and Wapichana, and signposts have been translated into the Indigenous languages.

Official language status also might increase the prestige of Macuxi and Wapichana, perhaps elevating their score on UNESCO's scale somewhere above Grade 3 ("passive assimilation") and below Grade 4 ("differentiated support": "Non-dominant languages are explicitly protected by the government, but there are clear differences in the contexts in which the dominant/official language(s) and non-dominant (protected) language(s) are used") (UNESCO 2003: 13). While Portuguese is still the language that prevails in the public domain, the co-officialization provides some measure of official protection.

¹⁶ van Diermen (2015: 22) highlights that "Only 8.133 of the 10.572 Wapichana people mentioned by the IBGE live in the Indigenous territories of Serra da Lua."

Factor 9 (Amount and Quality of Documentation)

Both Macuxi and Wapichana are quite well-documented for Brazilian Indigenous languages. The following two paragraphs outline a non-exhaustive list of linguistic work on each language.

Macuxi. In terms of descriptive linguistics, Macuxi has been written about in grammar sketches (Abbott 1991; Carson 1982; Carson 1983; Williams 1932), more specific linguistic studies in phonology (Hawkins 1950; Kager 1997; Cunha 2004; MacDonell 1994), morphosyntax (Derbyshire 1987; Abbott 1976; Abbott 1985; Gildea 2008; Gouvea 1993), semantics (Hodsdon 1976; Derbyshire 1991; Miguel 2018) and sociolinguistics (MacDonell et al. 2000; MacDonell 2003). Several pedagogical materials have been written about and in Macuxi (Amodio et al. 1996; Abbott 2003; Juvencio 2013). Texts and narratives in Macuxi are also available (Mayer 1951, Scannell 2018) as well as collections of sound recordings (Raposo et al. 1984, George et al. 1965).

Wapichana. Descriptive work on Wapichana includes a grammar of the language (Santos 2006), along with more specific studies on phonology (Santos 1995, Tracy 1972), verbal morphology (Tracy 1974), postpositions (Almeida 2017), negation (Pinho 2019; Amaral 2018; Basso & Giovannetti 2018), and quantification from functionalist (Silva 2018) and formal semantics (Sanchez-Mendes 2016; Giovannetti & Vicente 2016) perspectives. There has also been work written in applied linguistics (Leandro 2017), linguistic anthropology (Farage 1997), and sociolinguistics (van Diermen 2015), as well as Carneiro's (2007) toponymic atlas and Machado's (2016) social history of the language. Some bilingual dictionaries (Wapichana Language Project 2000 [Wapichana-English]; Cadete 1990, Silva et al. 2013 [Wapichana-Portuguese]) and pedagogical grammars (Oliveira et al. 2015; Juvêncio & Camilo n.d, as cited in Basso & Giovanetto 2018; Amaral et al. 2017; The Bilingual Minigrammar of the Serra da Lua Region, as cited in Giovanetti 2017) exist, as well.

van Diermen (2015: 24) classifies Wapichana as “definitely endangered” (“fair”, to use UNESCO's label) according to the following criterion: “There may be an adequate grammar or sufficient numbers of grammars, dictionaries and texts but no everyday media; audio and video recordings of varying quality or degree of annotation may exist” (UNESCO 2003: 16). This assessment seems accurate for Macuxi as well, based on the materials presented above: while there are grammars, dictionaries, non-annotated audio recordings, and much theoretical linguistics work on Macuxi, there seems to be little everyday media.

2.7 INTERIM SUMMARY: MACUXI AND WAPICHANA. A summary of the scores for Macuxi and Wapichana in Serra da Lua according to UNESCO's factors is presented in Table 7. Note that the scores for intergenerational transmission, trends in existing domains, responses to new domains, and proportion of speakers are quite low, corroborating previous reports of language shift for both languages. The constant contact with non-Indigenous culture and proximity to the city makes knowledge of Portuguese essential, and ensures that it will continue to supplant the use of Macuxi and Wapichana without revitalization efforts and the expansion of the languages' use in new domains. Although the languages are taught in schools, language classes are limited in time and do not produce fluent speakers if the child has not acquired it already (Pearson & Amaral 2014). In addition, there are not as many accessible materials for teaching Macuxi and Wapichana, and little print media in either language.

However, there are several positive factors for reversing language shift. Both Macuxi and Wapichana still have a large population of speakers (in the context of Brazilian Indigenous languages) and are fairly well-documented languages, Community members also have positive attitudes towards their language, and vigorously support revitalization and maintenance efforts. In addition, the recent co-officialization of Macuxi and Wapichana suggests that the use of these languages might gain more prestige and continue to expand domains in the future. van Diermen (2015) also suggests that the situation of Wapichana has dramatically improved since the 1980s, in no small part due to the efforts of local activists, especially in the avenue of education, demonstrating that significant progress has already occurred in reversing language shift.

Lastly, we would like to note that a major shortcoming of this study is that it relies entirely on self-reported data. As Rosés Labrada observes, there are differences between speakers' explicit and tacit knowledge of their language use and attitudes (that is, "what people can articulate about themselves with relative ease" versus "what is beyond people's awareness or consciousness" (2017: 36)). Self-reported data, of course, only gets at explicit knowledge and may be skewed by the interviewee's view of the interviewer's expectations. For example, it is possible that participants expected that the researchers, as linguists, would be invested in language preservation and thus answered questions regarding their attitudes toward Indigenous languages more positively. In such a multilingual environment, observational data would get at tacit knowledge and help provide a more robust understanding of which languages are actually used in which domains.

TABLE 7: Summary of UNESCO factors 1, 4, 5, 6, and 8 for Macuxi and Wapichana

Factor	Score	Label ¹⁷
1. Intergenerational Language Transmission	3/4	Definitively endangered / Unsafe
2. Absolute number of speakers	3,950 Wapichana 5,806 Macuxi	-
3. Proportion of speakers in the total population	2/3	Severely endangered / Definitively endangered
4. Trends in Existing Language Domains	3	Dwindling domains
5. Response to New Domains and Media	2	Coping
6. Materials for Language Education and Literacy	3	-
7. Governmental and Institutional Language Attitudes and Policies, including Official Status & Use	3	Passive assimilation
8. Community Members' Attitudes toward Their Own Language	4	-
9. Amount and Quality of Documentation	3	Good

¹⁷ The 'score' and 'label' columns of this table were extracted from UNESCO (2003)'s Language vitality and endangerment report. In cases where the UNESCO report does not provide an endangerment label, we left the 'label' field blank and only reported the endangerment score.

3. THE ROLE OF ENGLISH IN THE COMMUNITIES. Previous linguistic studies done with Macuxi and Wapichana communities on the Brazilian side of the Guyanese border mention the presence English speakers in Serra da Lua and other Macuxi and Wapichana communities in Roraima (Carson 1982; Pearson & Amaral 2014; Mac-Donell 2003). However, little is known about the role of English in these communities. Thus, a primary goal of our survey was to interview the English-speaking population in these communities.

We sought to investigate the domains in which English is spoken and the attitudes towards English. Although English is also a colonizing language with extreme global influence, it is a minority language in Serra da Lua. We were interested in the social significance of English in this context, especially in comparison to the social meanings of Portuguese, Macuxi and Wapichana. We were also interested in how cross-border migration might affect language proficiency (and lack thereof) and thus, participation in the community on the Brazilian side.

3.1 MOVEMENTS BETWEEN THE BRAZIL-GUYANA BORDER. The international border between Brazil and Guyana was created in 1904, splitting the traditional territory of both the Macuxi and Wapichana over two nation states. Indeed, cross-border movements have occurred frequently since the border's imposition, though the direction of migration has changed at various points in time. Before Guyanese independence from Britain in 1966, migration tended to be from Brazil to Guyana. However, after independence, Guyana has seen much political conflict and a weakened economy, leading to migration to Brazil both by Indigenous and non-Indigenous peoples (Baines 2005: 6). In the present day, these migrations are motivated by job opportunities, access to public services and marriage (cf. Carvalho 2015).

Though, as mentioned, there has been little written about the presence of English speakers in Indigenous communities, many anthropologists have written about cultural identity and ethnicity on the border and the sociocultural ramifications of migration for both Indigenous peoples (see Santilli 1994; Baines 2005). Attention has also been given to the diverse, multi-ethnic, multilingual student body of the schools in Bonfim (a border town of about 10,000 and the district in which Serra da Lua is situated), where students “live in tense relationships that express different ethnic and national identities” (Pereira 2007: 1), including indigeneity (Pereira 2007; Santos 2012; Souza & Lima 2014). Our focus on English speakers in Serra da Lua adds to this literature on identities and multilingualism at the border by investigating how English is specifically used in Indigenous communities on the Brazilian side, as well as investigating the social meaning and status which English holds.

3.2 WHO SPEAKS ENGLISH IN THE SERRA DE LUA? Our survey in Serra da Lua shows that twenty out of the total of thirty participants have some level of proficiency in English. Fourteen participants reported to be fluent, and six participants reported to be ‘partially fluent’.¹⁸ The breakdown by age is displayed in Table 8.

¹⁸ Partially fluent is a loosely defined category, ranging from being able to understand but not speak, to being able to speak some of the language. See categories 2-4 in the chart in Section 2, Question 1, in Appendix A.

TABLE 8: Number of English speakers, by age¹⁹

	Age < 18	Age 18-45	Age 46+
Fluent speakers	0	3	11
Partially-fluent speakers	1	4	1

As the data show, most of the fluent speakers of English are older, Guyanese migrants who were born and educated in Guyana, coming to Brazil and learning Portuguese as adults. Other than one English speaker who reported being able to only speak some Portuguese, every English speaker is also a fluent speaker of both Wapichana and Portuguese. Many participants stressed their multilingualism, noting that the language they use is negotiated according to their interlocutor and the situation.

Based on the responses to questions about domains of language use, it appears that English is used far less frequently than Portuguese or Indigenous languages in these communities.²⁰ Some participants reported that they use English with immediate family members such as parents, grandparents, spouses, and children; in village meetings and during work and leisure activities. However, most of the English-speaking participants do not use English. For example, five out of fourteen fluent English speakers reported using English with their children; and three out of fourteen fluent speakers reported using it during leisure activities. Most who reported using English also reported using Portuguese and/or Wapichana in the same domain (i.e. they reported using English and Portuguese at village meetings, for example).

All six participants who self-identified as “partially fluent” in English either have immediate family (parents, grandparents) who had come from Guyana and learned English with these relatives or lived in Guyana for some period of time. They did not report using English at all, or reported using it in limited domains such as village meetings or with specific interlocutors, like grandparents or elders.

English functions somewhat as a heritage language in this context: Guyanese migrants speak the language fluently but quickly shift from one state language to the other after migration. Their children, who have been exposed to the language at home, only partially acquire English, if at all, and seem unlikely to use the language with their own children. Of course, the loss of English does not have the same implications as shift from Indigenous language—English is not prized as an essential symbol of cultural identity as the Indigenous languages are. While all English speakers valued their linguistic repertoire, only one identified in any way with *being* “English”, saying she felt “more like an English girl” than a Wapichana person. None identified with being Guyanese. However, further research is needed in order to understand how the linguistic repertoire of English might allow English speakers in these communities to perform identities through language practices.

Lastly, it is important to state that we interviewed English speakers who had left Guyana many years ago, and settled in Brazil. This population is multilingual in both Portuguese and the Indigenous languages, and as a result, is not excluded either from community life or from interacting with the Brazilian state due to a lack of proficiency in Portuguese. However, it is not clear what the experiences of Wapichana and Macuxi who have arrived more recently in Brazil are like.

¹⁹ This chart is not broken down by ethnicity, as all of these speakers are Wapichana, except for one Macuxi interviewee (aged 78).

²⁰ From the observations of the first author, Portuguese seemed to be more dominant than English for many of the English speakers; for example, when responding to questions about more abstract topics such as identity, many interviewees switched to Portuguese.

3.3 ATTITUDES TOWARD MULTILINGUALISM AND ENGLISH. Multilingualism is highly valued in Serra da Lua—a recurring statement from survey participants was “it’s important to speak all languages”. The Wapichana and Macuxi languages are valued for their perceived inherent link to ethnic identity and, unsurprisingly, Portuguese is viewed as necessary for interacting with the state and non-Indigenous people. English is also valued for its status as a global language of technology and its utility for communication with people from outside the community and country. Some of the English speakers also wanted their children and grandchildren to learn English because they spoke it themselves. Knowing other Indigenous languages is seen as important for facilitating communication with other Indigenous groups.

When discussing the importance of English and Portuguese, participants often invoked ideas of mobility and migration, noting that Portuguese is necessary when travelling to the city and that English is necessary if one is outside the country. For one participant, for example, English and Portuguese are important “*because no one will stay in a single place. You have to leave. Given the jobs that some people get somewhere, they have to know how to speak all [languages], write and read [them], too.*”

Leaving the community, as mentioned in the participant’s statement, is seen as almost inevitable, an event that will require a robust linguistic repertoire which includes English. Learning “all languages” is a way to prepare for future mobility in the border region, where there is constant movement between Indigenous communities and the city, as well as between the Brazil-Guyana borders. European languages, then, are thought of as “linguistic capital” (Bourdieu 1977; 1991) which can be converted into other forms of capital, in contrast to evaluations of Macuxi and Wapichana, which are valued for their connection to Indigenous culture and identity.

Yet, English proficiency is not maintained in this community; people who have not migrated from Guyana, or do not have immediate family from there, do not speak English. There is little immediate need for English in Brazil, as interaction with the state and non-Indigenous people requires Portuguese. However, while English has little influence on the linguistic repertoire of the community, it is imagined to be a tool in the linguistic repertoire which expands one’s range of interlocutors and potential to participate in the market economy.

Portuguese and English are valued as tools of communication that facilitate communication with those outside of the community—Portuguese allows access to non-Indigenous interlocutors, while English allows access to foreigners (including scholars), as well as globalized technology. Further research on the linguistic situation in Serra da Lua might explore how interactions, bounded in language, allow speakers to negotiate their identities—as Macuxi, Wapichana, Brazilian, Guyanese, or other hybrid identities. Research involving participant observation, in particular, would allow more insight into how language and identity may be negotiated in such a multilingual setting.

4. CONCLUSIONS. In conducting this survey, we were interested in the status and vitality of each language (Macuxi, Wapichana, English, and Portuguese) spoken in three communities in the Serra da Lua region of Roraima, Alto Arraia, Pium, and Manoá. Though there have been previous language vitality surveys conducted in this region, our survey was particularly concerned with all languages in context, as well as the role of English in the communities, an area that has not been well studied. We addressed two main topics in this paper: first, drawing on both survey data, census data,

and previous literature, we assessed Macuxi and Wapichana's language vitality according to UNESCO's "Nine Factors" tool. Second, we provided some preliminary observations on the use and status of English in these communities, when compared with the function of Portuguese, Macuxi, and Wapichana.

In our assessment of Macuxi and Wapichana based on the "Nine Factors", we noted that while some factors, particularly intergenerational transmission, proportion of speakers, and domains of use, have low scores, there are many positive factors that may help reverse language shift towards Brazilian Portuguese, namely community members' positive attitudes toward their Indigenous language. In addition, it has been asserted (van Diermen 2015) that the situation in this region has improved significantly since the 1980s, at least for the Wapichana language.

While English is used daily in the communities in Serra da Lua, its influence seems to be limited. From our sample, most of the people who speak it are older members of the community, born in Guyana; coincidentally, these English speakers are highly multilingual, speaking Wapichana and Portuguese in addition to English. After their migration to Brazil, English speakers rapidly shift to using Portuguese and Wapichana. Children born in Brazil to English-speaking parents tend to retain little of the language. English, in this context, patterns almost like a heritage language. Yet, along with Portuguese, English is understood as a useful tool in the linguistic repertoire. In a place where migration is common, knowing "all languages" is extremely valuable.

In multilingual societies such as the ones in Serra da Lua, it is expected that language dominance will shift according to the context. Future language surveys such as the one presented here will allow us to observe how the maintenance of the non-dominant languages of Macuxi, Wapichana, and English will evolve over the years. Language surveys may also bring an important contribution to Indigenous teachers, as they can be used to better understand the profile of the members of their communities and their interest in terms of language education and production of pedagogical resources. For example, Celino Raposo, the Macuxi professor with whom we worked with (p.c.) reported the relevance of the production of materials that might support indigenous immigrants from Guyana who speak neither Portuguese nor one of the Indigenous languages.

Finally, it would be useful to analyze the self-reported data along with ethnographic data since self-reported responses may also be impacted by the speakers' attitudes towards the languages spoken in the community. That is, observational, ethnographic studies, as pointed out by Rosés Labrada (2017), will allow for more robust further inquiry into how Indigenous people in this multilingual community use their linguistic repertoires.

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Appendix A: Questionnaire used in the language vitality survey**SEÇÃO I: INFORMAÇÕES BÁSICAS****SECTION I: BASIC INFORMATION****Nome:**

Name:

Idade:

Age:

Sexo:

Gender:

Etnia:

Ethnicity:

Data de nascimento:

Place of birth:

Há quantos anos moram na aldeia?

How long lived in community:

Estado civil:

Marital Status:

Número de filhos:

Number of children:

Nível de educação (por exemplo, concluiu o primário/ secundário/graduação?)

Level of education (i.e. finished primary/secondary/post-secondary)?

Onde estudou? Dentro ou fora da comunidade?

Where was education completed (i.e. inside or outside the community?)

SEÇÃO II:**AUTO-AVALIAÇÃO LINGÜÍSTICA E DOMÍNIOS DE USO DA LÍNGUA****SECTION II: LANGUAGE SELF-EVALUATION AND USE WITHIN DOMAINS****1. Como você avaliaria o seu conhecimento das seguintes línguas?**

How would you rate your knowledge of the following languages?

	Não entendo e não falo (1)	Entendo mas não falo (2)	Posso entender tudo/quase tudo, mas não falo (3)	Posso entender tudo/falo pouco (4)	Consigo falar sobre alguns aspectos, mas não tudo (5)	Consigo falar fluentemente sobre qualquer coisa.(6)
Macuxi						
Português (Portuguese)						
Wapichana						
Inglês (English)						

1 Cannot understand, or speak

2 Can understand some, but cannot speak.

3 Can understand all/almost all, but not speak.

- 4 Can understand all/almost all, can speak some
 5 Can speak fluently, but on restricted topics
 6 Can speak fluently, on any topic

2. (Caso não sejam faladas pelo entrevistado), as línguas abaixo são faladas na sua comunidade?

(If not spoken by interviewee) are the languages below spoken in your village?

Inglês (English)	() Sim [yes]	() Não [no].
Macuxi	() Sim [yes]	() Não [no].
Wapichana	() Sim [yes]	() Não [no].

3. A partir da tabela 1: como você aprendeu cada língua? Quando era criança, com pais e familiares? Na escola? Adulto?

(based on Table 1) How did you learn each language? As a child, with your parents/family members? In school? As an adult?

Macuxi	
Português (Portuguese)	
Wapichana	
Inglês (English)	

4. Em quais línguas você se sente mais confortável?

Which language(s) are you the most comfortable in?

5. Quais línguas você usa para falar com:

Which language(s) do you use the most to speak to:

Pais (Parents)	
Avós (Grandparents)	
Pessoas mais velhas (Elders)	
Esposa/Marido (Husband/wife)	
Filhos (Children)	
Amigos (Friends)	

6. Quais línguas você usa mais para falar com:

Which language(s) do you use **the most** when:

Na escola (se estiver na escolar) com os amigos (At school (if in school) to friends)	
Na escolar com os professores (At school to teachers)	
Em atividades do dia a dia (plantação, pescaria, construção de casas) (While working, doing day-to day activities (such as farming, fishing, building houses etc.)	

Em encontros na comunidade/ atividades culturais At village meetings/cultural activities	
Esportes/Lazer (During sports/leisure activities)	
Com figuras de autoridade (FUNAI) With authority figures (e.g. FUNAI)	

7. Qual língua(s) você usaria para expressar as seguintes emoções:

Which languages would you use for expressing the following emotions:

Felicidade (Happiness)	
Tristeza (Sadness)	
Raiva (Anger)	
Contando uma piada (Telling a joke)	
Para ser carinhoso (saying affectionate words)	
Falando de política (talking about politics)	
Falando no trabalho (talking about work)	

SÓ PARA LÍDERES DA COMUNIDADE
FOR COMMUNITY LEADERS

8. Com qual frequência você usa documentos bilíngues?

How often do you have bilingual documents?

SEÇÃO III: LÍNGUA E EDUCAÇÃO
SECTION III: LANGUAGE EDUCATION

1. Você sabe ler e/ou escrever? Em quais línguas você consegue escrever e ler?

Do you know how to read/write? In which languages can you read and write?

2. Se você frequentou escolas, em qual língua foi ensinado?

If you went to school, which languages were taught?

3. Você aprendeu Macuxi/Wapichana na escola?

Did you learn Macuxi/Wapichana in school?

4. Caso sim, com qual frequência teve aulas de língua indígena? Quantas vezes por semana/dia?

If so, how often? How many times a week/day?

5. Quando você começou a aprender português/inglês?

When did you start learning Portuguese/English?

6. Na escola, quais línguas o seu professor falava? Você se lembra em quais línguas ele falava com você? Quais línguas você usava para falar com os colegas?

In school, what languages did your teachers speak? Do you remember what languages they spoke to you in? Which languages did they use to speak amongst themselves?

7. Se você aprendeu Macuxi/Wapichana na escola, quais materiais estavam disponíveis?

If you have learned Macuxi/Wapichana in school, what materials were available?

SEÇÃO IV: TEMPO DISTANTE DA COMUNIDADE

SECTION IV: TIME AWAY FROM THE COMMUNITY

NOTE: TO BE FILMED, IF INTERVIEWEE GIVES CONSENT

Você já morou fora da comunidade?

Have you ever lived outside of the community?

() Sim

() Não

If “yes”, continue to question 1. If “No” go to question 6.

- 1. Por quanto tempo você ficou distante da comunidade (em anos)?**
How much time have you spent away from the community (in years)?
- 2. Por qual razão você saiu (trabalho, estudo)? Qual tipo de trabalho você fazia?**
For what purpose did you leave (work, school)? What type of work did you do?
- 3. Você gostou de passar tempo em outro lugar?**
Did you enjoy your work and your time away from the community?
- 4. Porque decidiu passar um tempo fora da comunidade?**
Why did you leave?
- 5. Você tem amigos que não são indígenas? Com qual frequência fala com eles e em qual língua**
Do you have friends who are non-indigenous? How often do you speak to them? In what language?
- 6. Você se sente Macuxi/Wapichana? O que significa ser macuxi/Wapichana?**
Do you feel very Macuxi/Wapichana? What does it mean to feel Macuxi/Wapichana?
- 7. Quando alguém muda da comunidade, isso afeta se a pessoa é Wapichana/Macuxi?**
Did leaving the community change your opinion of this?
- 8. Se você não nunca morou em outro lugar, teria interesse em fazer isso?**
If you haven't left yet, would you like to study/work in some place else? Where and why?

SEÇÃO V: SENTIMENTOS EM RELAÇÃO ÀS LÍNGUAS INDÍGENAS E NÃO-INDÍGENAS

SECTION V: EVALUATIONS OF INDIGENOUS AND NON-INDIGENOUS LANGUAGES

NOTE: TO BE FILMED, IF INTERVIEWEE HAS GIVEN CONSENT

- 1. Você gosta de falar Macuxi/Wapichana?**
Do you like speaking Macuxi/Wapichana?
- 2. Se você não fala Macuxi/Wapichana, você acha que isso te prejudica de alguma forma?**
If you cannot speak the Macuxi/Wapichana language, do you feel that this limits you in some way? Why and how?
- 3. Você considera importante que as crianças aprendam Wapichana/Macuxi no futuro?**
Por que?
Do you think it is important for children in the future to learn the Macuxi/Wapichana language? Why?
- 4. Você acha que Macuxi/Wapichana devem ser ensinadas na escola? Should**
Macuxi/Wapichana be taught (continue to be taught) in schools)? Why?
- 5. Você gostaria de ver mais programas focados na preservação da língua e cultura Macuxi/Wapichana?**

Do you want to see more programs devoted to the preservation of Macuxi/Wapichana language and traditions?

6. **Quão importante você julga ser aprender e usar o português? Por que?**
How important is it for you to learn and use Portuguese? Why?
7. **Quão importante você julga ser aprender e usar o inglês? Por que?**
Is it important to learn English? What do you think about English?
8. **Você considera importante aprender línguas indígenas faladas em Roraima (por exemplo, Taurepang, Ye'kwana) que não sejam a sua própria língua?**
Do you think that it's useful to speak other indigenous languages spoken in Roraima (e.g. Taurepang, Ye'kwana) that isn't your mother tongue?

SEÇÃO VI: NOVOS DOMÍNIOS

SECTION VI: NEW DOMAINS

1. **Você usa a internet? Para que usa (trabalho, facebook, etc)?**
Do you use the internet? If so, what do you use it for (work, facebook, etc)?
2. **Se você fala com um(a) amigo(a) Macuxi/Wapichana online, você usa a língua indígena ou outra? Qual língua você usaria com esse mesmo(a) amigo(a) quando o encontra pessoalmente?**
If talking to a Macuxi/Wapichana friend online, do you use Macuxi/Wapichana, or some other language? What language would you use with this person in real life?
3. **Você acha que seria importante o desenvolvimento de materiais online do Macuxi/Wapichana? Qual uso você acha que esses materiais teriam?**
Would you like to see the development of online materials in Macuxi/Wapichana? Do you think you would use it?
4. **Existem jornais/programas de TV/programas de radio em Macuxi/Wapichana?**
Are there newspapers/TV programs/radio programs in Macuxi/Wapichana?
5. **Caso sim, com qual frequência eles são disseminados? Você ouve/lê/vê esses programas?**
If so, how often do they circulate/are they disseminated? Do you read/listen/watch them?